

I claim:

1. A method for isolating paint with a non-conductive oxide constituent from a conductive surface to facilitate cleaning thereof, comprising the steps of:

providing a conductive, primer coat having up to 80% finely divided conductive material by volume dispersed in a combustible, hardening base;

5 applying the conductive primer coat to the conductive surface and allowing the base to harden; and

applying paint having a non-conductive oxide constituent over the primer coat.

2. The method of claim 1 wherein the finely divided conductive material is carbon.
3. The method of claim 1 wherein the conductive primer coating is applied to the conductive surface by spray painting.
4. The method of claim 1 wherein the conductive primer is applied to the conductive surface by powder coating.
5. The method of claim 1 and further comprising the step of burning-off the paint and non-conductive oxide constituent, together with the combustible base primer coat, so as to provide a clean conductive surface for application of another primer coating.
6. The method of claim 1 and further comprising the step of chemically removing the paint and non-conductive oxide constituent, together with the conductive primer coating, so as to provide a clean conductive surface for application of another primer coating.
7. The method of claim 1 and further comprising the step of mechanically removing the paint and non-conductive oxide constituent, together with the conductive primer coating, so as to provide a clean conductive surface for application of another conductive primer coating.

8. A method for isolating paint with a non-conductive oxide constituent from product support hooks, as used for electrostatic painting, comprising the steps of:

providing a conductive primer paint having up to approximately 80% by volume of a finely divided conductive material dispersed in a hardening, combustible base;

5 applying the conductive primer coating to the product support hooks and allowing the base to harden;

attaching product units to the product support hooks for painting;

grounding the product support hooks, so that electrical continuity is established through the conductive primer to the product units;

10 providing electrostatically charged paint having a non-conductive oxide constituent; and

electrostatically attracting the charged paint to the grounded product units and the conductive primer coating of the product support hooks, so as to paint the product units, thereby also depositing paint on the conductive primer coating.

9. The method of claim 8 wherein the finely divided conductive material is carbon.
10. The method of claim 8 wherein the conductive primer coating is applied to the conductive surface by spray painting.
11. The method of claim 8 wherein the conductive primer is applied to the conductive surface by powder coating.
12. The method of claim 8 and further comprising the step of burning-off the paint and non-conductive oxide constituent, together with the combustible base primer coating, from the support hooks, so as to provide a clean conductive surface for application of another primer coating.
13. The method of claim 8 and further comprising the step of chemically removing the non-conductive oxide bearing paint, together with the primer coat, from the support hooks, so as to provide a clean conductive surface for application of another primer coating.
14. The method of claim 8 and further comprising the step of mechanically removing the paint and non-conductive oxide constituent, together with the base coat, from the support hooks, so as to provide a clean conductive surface for application of another primer coating.
15. The method of claim 8 and further comprising the step of manually removing the paint and non-conductive oxide constituent, together with the base coat, from the support hooks, so as to provide a clean conductive surface for application of another primer coating.

16. Apparatus for isolating paint with a non-conductive oxide constituent from a conductive surface to facilitate cleaning thereof, comprising:

- a conductive surface;
- a conductive primer paint, having up to approximately 80% by volume of finely divided conductive materials dispersed in a combustible base, coating the conductive surface; and
- a paint having a non-conductive oxide constituent applied over the primer coating.

17. Apparatus according to claim 16 wherein the finely divided conductive material is carbon.

18. Apparatus according to claim 16 wherein the conductive primer coating is spray painted onto the conductive surface.

19. Apparatus according to claim 16 wherein the conductive primer is powder coated onto the conductive surface.

20. Apparatus according to claim 16 and further comprising a controlled atmosphere burn-off oven to provide elevated temperatures for removal of the paint and non-conductive oxide constituent, together with the conductive primer coatings from the conductive surface, so as to provide clean surfaces for application of another primer coating.

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21. Apparatus according to claim 16 and further comprising a caustic chemical wash for removing the paint and non-conductive oxide constituent, together with the conductive primer coating from the conductive surfaces, so as to provide clean surfaces for application of another primer coating.

22. Apparatus according to claim 16 and further comprising the step of manually removing the paint and non-conductive oxide constituent, together with the base coat, from the support hooks, so as to provide conductive surfaces for application of another primer coating.

23. Apparatus for maintaining the electrical continuity in an electrostatic spray painting product process line comprising:

an electrostatic painting enclosure including an electrically charged paint source;

5 a looped and electrically grounded conveyor chain and track passing through the painting enclosure;

electrically conductive product support hooks attached to the conveyor chain at spaced intervals;

10 an electrically conductive primer coating, having up to approximately 80% finely divided conductive material by volume dispersed in a combustible base and applied to the surface of the product support hooks;

one or more coats of paint from the charged source coating the product support hooks over the primer coating, so as to be isolated thereby from the hook surface; and  
means for removal of the paint and primer coatings.

24. Apparatus according to claim 23 wherein the finely divided conductive material is carbon.
25. Apparatus according to claim 23 wherein the conductive primer coating is applied to the conductive surface by spray painting.
26. Apparatus according to claim 23 wherein the conductive primer is applied to the conductive surface by powder coating.
27. Apparatus according to claim 23 wherein the means for removal of the paint and primer coatings comprises a controlled atmosphere burn-off oven.
28. Apparatus according to claim 23 wherein the means for removal of the paint and primer coatings comprises a caustic chemical wash.
29. Apparatus according to claim 23 wherein the means for removal of the paint and primer coatings is manual scrubbing.

30. Apparatus for isolating paint with a non-conductive oxide constituent from a conductive surface to facilitate cleaning thereof, comprising:

a conductive surface;

5 a conductive primer coating, having up to approximately 80% by volume of finely divided conductive material, dispersed in a combustible base for application to the conductive surface;

one or more coats of paint having a non-conductive oxide constituent applied over the primer coating; and

means for removing the one or more coats of paint.

31. Apparatus according to claim 30 wherein the finely divided conductive material is carbon.
32. Apparatus according to claim 30 wherein the conductive primer coating is applied to the conductive surface by spray painting.
33. Apparatus according to claim 30 wherein the conductive primer is applied to the conductive surface by powder coating.
34. Apparatus according to claim 30 wherein the means for removing the one or more coats of paint comprises a controlled atmosphere burn-off oven with elevated temperatures for removal of the paint and prime coatings, so as to provide a clean conductive surface for application of another primer coating.
35. Apparatus according to claim 30 wherein the means for removing the one or more coats of paint comprises a caustic chemical wash for removal of the paint and primer coatings, so as to provide a clean conductive surface for application of another primer coating.
36. Apparatus according to claim 30 wherein the means for removing the one or more coats of paint comprises media blasting for removal of the paint and primer coatings, so as to provide a clean conductive surface for application of another primer coating.